1994 IN REVIEW



"CLOSURE PROHIBITED - THE UNIFORMED SERVICES UNIVERSITY OF THE HEALTH SCIENCES (USUHS) MAY NOT BE CLOSED".

-National Defense Authorization Act for the Fiscal Year 1995.

Congressional Issues

In January 1994, when USUHS submitted its report on the year, the morale of the faculty, students and staff was being sorely tested because of a recommendation for the closure of USUHS by the National Performance Review (NPR) Report in September 1993. The NPR recommendation was based on the assumption that military physicians can be acquired and trained more economically through other means, including the Health Professions Scholarship Program. For this reason, President Clinton recommended to Congress that the University be closed, and that recommendation was embodied in HR3400, the Government Reform and Savings Act of 1993, which passed the House of Representatives on November 22, 1993. The Senate did not act upon this legislation.

Once USUHS supporters on Capitol Hill and in the civilian and military medical communities became aware of the threat of closure to the nation's only military medical school, they sent notice of their concerns to both President Clinton and to the Secretary of Defense. The legislators also promised that an extensive review would take place before a decision was made by Congress. As Public Law 92-426 established the USUHS, only Congress has the legal authority to close the University.

Congressional hearings on the University were held by the Senate Armed Services Committee on March 2, 1994. At that hearing, military medical combat experts, medical school deans, the Surgeons

General, senators, and congresspersons all testified to the absolute requirement for a federal, military medical school. On March 25, 1994, the Senate Committee on the Budget rejected the NPR proposal for closure with the following statement: "The Committee rejects proposals to close the USUHS. This respected institution, with its unique emphasis on military medicine, is needed to address current and future needs of the Armed Services as well as the Public Health Service."

The Subcommittee on Defense of the Senate Committee on Appropriations held hearings on USUHS on April 14, 1994. Senator Inouye, in his capacity as Chairman, Senate Defense Appropriations Subcommittee, advised Department of Defense officials that he had "no intention to grant legislative authority to close the University." Testimony was once more introduced into the Congressional Record to underscore the University's accomplishments, unique graduates, and the essential role USUHS provides as the academic center for military medicine. The compelling testimony of USUHS medical school graduates who were deployed to Somalia and Operation Desert Storm emphasized the requirement for military physicians trained in combat medicine.

In addition to the Senate committees that issued strong support for the continuation of USUHS, hundreds of letters, statements of support and expressions of concern have been written in bi-partisan defense of USUHS by senior legislators (federal, state and community), both civilian and military medical organizations, and military medical combat experts. A partial listing of organizations opposed to the closure of USUHS includes the following: the American Medical Association; the Association of American Medical Colleges; the American Association of Academic Health Centers; the American College of Physicians; the American College of Surgeons; the American Academy of Pediatrics; the American Academy of Family Physicians; the American College of Obstetricians and Gynecologists; the American Psychiatric Association, the Society of Teachers of Family Medicine; the Organizations of Academic Family Medicine; the Society of Medical Consultants to the Armed Forces; the National Medical Veterans Society; the American Veterinary Medical Association; the Departments of the Navy and Air Force; the American Legion; the Military Coalition; the National Association for Uniformed Services; the Reserve Officers Association; the Retired Officers Association; and the Association of the United States Army.

Each of these organizations has gone on the record to state that USUHS is a highly qualified and valuable institution that must be preserved. Congressional testimony has once more emphasized the vital role of USUHS in military medical readiness.

After a review of testimony from the congressional hearings and the written statements of support, the National Defense Authorization Act of August 12, 1994, stated that, "The conferees believe that continuing efforts to close USUHS harm the University's ability to attract and retain the high quality faculty appropriate for a medical school of its stature, and should only be undertaken after careful, rigorous analysis, and a comprehensive review of the USUHS role in the National Health Care System." The Committee on Armed Services and the Committees on Appropriations of the Senate and House of Representatives also have called for "a GAO report on USUHS, to review its costs, the

quality of its medical education, the requirements for military physicians, and other relevant matters." The GAO began its review on September 13, 1994; Congress has requested that the GAO report should be concluded by June 1, 1995.

Retention/Leadership Role

Amid this congressional activity, the USUHS faculty and staff have continued to fulfill their daily responsibilities. In August 1994, the F. Edward Hebert School of Medicine matriculated its nineteenth class (the Class of 1998). Over 2,900 applicants **representing all 50 states** competed for 165 positions. **There were 18 applicants for each position.** The acceptees had a mean college grade point average (GPA) of 3.4 and a mean science GPA of 3.4. The mean score of the acceptees on the Medical College Admissions Test (MCAT) was 9.8. These figures compare quite favorably with those of the matriculants to the other 125 U.S. medical schools.

Applicants to the medical school are, in part, selected based on their motivation for a career in public service. The University has done an extraordinary job of reinforcing this sense of commitment and duty in its 1,991 medical school graduates. More than 95 percent of USUHS School of Medicine graduates are still serving today in the Army, the Navy, the Air Force, and the Public Health Service.

Also notable is the fact that, of those who have completed their required obligation and could leave the services, 89 percent continue to serve our nation. These statistics emphasize that USUHS has met one of the major goals established by its founding legislation——the creation of a cadre of career medical officers who will ensure continuity and military medical readiness. Today, USUHS graduates constitute approximately 14 percent of the active duty military physician work force. As the founders of USUHS emphasized, it is important to recognize that no matter what size the nation's defense structure assumes, the health requirements of our service members demand the constant presence of military physicians who possess strategic knowledge of the practice of military medicine.

Based on these facts, it comes as no surprise that current USUHS graduates are serving in key leadership positions in each of the uniformed services. USUHS graduates represented 50 percent of those selected for below-the-zone promotions (earlier than usual) to Army and Navy 0-5 positions last year. USUHS alumni accounted for 61 percent of those selected for below-the-zone promotions for Army 0-4 positions, and 18.8 percent of those selected below-the-zone for Navy 0-4 positions. USUHS graduates frequently earn recognition for academic, clinical, and military accomplishments. Among these accomplishments are: the MacKay Trophy for most meritorious flight by Air Force personnel, Air Force Flight Surgeon of the Year for 1986, 1987, 1988 and 1993, and the chief White House physician. USUHS graduates have participated and played key roles in numerous military and humanitarian operations at home and abroad, including: Operation Just Cause (Panama); Operations Desert Shield and Desert Storm; Operation Provide Comfort (Kurdish Relief); Somalia, Bosnia, Croatia, and Hurricanes Hugo and Andrew relief operations; the 1993 mid-western flood relief; and the operations to restore democracy in Haiti. The outstanding performance of USUHS graduates, in peace

and war, reinforces Congress' belief that it is imperative for military readiness that our armed services have a cadre of men and women uniquely trained in military medicine.

Military Unique Curriculum

The USUHS F. Edward Hébert School of Medicine is the only medical school in the United States that trains physicians to practice the unique discipline of military medicine. Since its establishment in 1972, almost 2,000 regular medical officers have graduated from the University. In addition to the time these officers spend in internships and residencies, they serve an obligation of at least seven years in their respective services.

According to data supplied by the Association of American Medical Colleges (AAMC), the USUHS curriculum is in the 95th percentile of all medical schools for number of scheduled academic hours per week. The USUHS medical curriculum is distinct from that of the other 125 U.S. medical schools in several aspects. Prior to reporting to the University, each medical student new to the military receives four to six weeks of military orientation at the officer indoctrination course of the individual's service. These courses present service specific instruction on subjects such as administration, customs, leadership, and officer responsibilities. In addition to the usual medical school curriculum, USUHS has a uniquely integrated curriculum in military medicine which is woven into the educational programs throughout the four years of the medical school.

At USUHS, the militarily relevant aspects of preventive medicine, public health, human physiology, surgery, psychiatry, infectious diseases, tropical medicine, parasitology, and ethics are incorporated into the regularly taught courses on these subjects. Solid exposure to family practice, emergency medicine, and neurology are requirements at USUHS. Students experience the realities of military medical practice while at USUHS through extensive clinical training in military medical institutions. In addition, the military environment and elective opportunities at USUHS provide four years of military experience and indoctrination, which is difficult to quantify in terms of equivalent weeks of instruction. The USUHS required curriculum includes the traditional medical program requirements plus the following unique militarily-relevant components:

- Officer Basic Course with the parent service (four-six weeks except for those with prior military service)
- Military Studies I and II (eight credit hours)
 - Military Medicine
 - Combat Medical Skills
 - Military Applied Physiology
 - Leadership
 - Military Operational Medicine
 - History of Military Medicine
 - Field Preventive Medicine
 - Combat Casualty Care
 - Weapons Effects
 - Nuclear/Biological/Chemical Defense
 - Operational Medical Support And Case Studies

- Parasitology and Medical Zoology (two credit hours)
- Epidemiology and Biometrics and Preventive Medicine (six credit hours)
- Medical and non-medical field training (two weeks)
- Military Medical Field Studies with parent service (three-four weeks)
- 3rd and 4th year clerkships and rotations in military medical centers
- Military Preventive Medicine (one week)
- Military Contingency Medicine, including Combat Stress, Basic Life Support, Acute Cardiac Life Support and Acute Traumatic Life Support certification at Bushmaster/C4 course
- Military Emergency Medicine (four weeks)

Most of this training is <u>not</u> available at other institutions. Since students under the Armed Forces Health Professions Scholarship Program (AFHPSP) attend numerous medical schools throughout the U.S., it would not only be cost prohibitive but highly unlikely that these civilian medical schools would be amenable to modifying their curriculum to accommodate a few AFHPSP students.

ACADEMIC ACTIVITIES

Accreditation

The USUHS School of Medicine was mandated by congressional legislation to graduate "not less than 100 medical students annually, with the first class graduating not later than September 21, 1982." The first USUHS medical school class graduated in May of 1980, and more than 100 students have graduated each year since 1982, for a total of 1,991.

The University is unique by virtue of its mission and ownership. It is fully accredited by the Commission on Higher Education, the Middle States Association of Colleges and Schools. The medical school is fully accredited by the Liaison Committee on Medical Education. To meet the mandates of legislation and required standards for accreditation as an academic institution, USUHS produces, or provides the following: continuing medical education for serving medical officers; support for military residency training programs; special military/public health education programs; graduate education in the biomedical sciences; applied and basic research; consultative services to the Department of Defense on health care and health care delivery in times of combat and contingency and humanitarian operations; and medical care for military beneficiaries provided by the School of Medicine clinical faculty in the course of teaching. To fulfill these missions effectively, USUHS has become an academic center for the maintenance and advancement of military medicine. All of these products are resourced as part of the operating cost of USUHS, and all are part of USUHS' value to the nation.

Graduate Programs

The University, in its School of Medicine, offers fully accredited graduate programs in the basic medical sciences. Applicants are admitted to doctoral study in anatomy and cell biology, molecular and cell biology, biochemistry, clinical psychology, medical psychology, microbiology and

immunology, neuroscience, pathology, pharmacology, medical zoology and physiology. Master's degrees are offered in public health and in tropical medicine and hygiene. At this year's commencement ceremony, 11 doctoral degrees and 26 master's degrees in basic and applied health sciences were awarded to a group of civilian and uniformed health scientists who studied in the USUHS School of Medicine graduate programs.

All USUHS School of Medicine graduate programs, except for clinical psychology, are open to both civilian and uniformed applicants. Graduate students contribute time as teaching and research assistants. Uniformed services personnel accepted into graduate study may incur an additional service obligation. The doctoral program in clinical psychology at this time is open only to active duty uniformed personnel.

USUHS first admitted graduate students in 1977, and since then, 565 have matriculated; 128 have completed graduate study and received the Doctor of Philosophy, 30 received the Master of Science, 182 have completed the Master of Public Health, and 16 have completed the Master of Tropical Medicine and Hygiene. Of the graduate degrees awarded, 20 Doctor of Philosophy, four Master of Science, 13 Master of Tropical Medicine and Hygiene and 112 Master of Public Health have been conferred on uniformed students. There are 109 students enrolled in graduate study at this time.

Research

The recent full re-accreditation of USUHS and the School of Medicine are indicative of the fine academic credentials of our faculty and staff. A recent search to determine where the School of Medicine faculty were publishing and where they were being cited over a two-year period (January 1992-January 1994) found 1,078 papers published in 392 journals and 4,206 citings in 868 journals.

In Fiscal Year 1994, School of Medicine faculty conducted research on more than 350 projects, with a value totaling more than \$25 million, much of which was supported by competitive, extra-mural funding. While these projects cover a wide area of biomedical research interests, our faculty members conducted 81 research projects specifically supported by other DoD agencies.

The magnitude and breadth of the research activity contributes greatly to the medical knowledge and technology base available to the Department of Defense. This research covers such areas as infectious diseases, combat casualty care, wound healing, factors which affect military performance, and responses to the stresses of military life. The overall quality of this research is indicated by the fact that the School of Medicine investigators maintained a success rate of 40 percent of applications that were funded by the National Institutes of Health during FY93, whereas the overall success rate for all applications to NIH was 24.5 percent.

In its quest to conserve scarce government resources while, at the same time, share its diverse research efforts, the University was an early advocate of the Federal Technology Transfer Program.

The University's School of Medicine is among the leaders in medical biotechnology research, achieving a unique distinction of having almost 100% of its patent portfolio under license. Expansion of

cooperative research and development agreements with the private sector is in keeping with the Administration's goal to reinvent government by **forging research relationships in the national interest.**

OTHER PRODUCTS/SERVICES

CONGRESS HAS TASKED THE GAO (GENERAL ACCOUNTING OFFICE) TO COMPLETE A THOROUGH REVIEW OF USUHS' PRODUCTS AND SERVICES TO INCLUDE...

"THE OVERALL ISSUE OF THE SPECIAL NEEDS OF MILITARY MEDICINE...."

-National Defense Authorization Act for the Fiscal Year 1995.

Graduate Medical Education

In 1986, the position of the Assistant Dean for Graduate Medical Education (GME) Liaison was established to provide consultation on GME programs (internship, residency and fellowship training for physicians) for program directors and the Office of the Assistant Secretary of Defense for Health Affairs (OASD(HA)). The position expanded to an office that provides DoD-wide consultation and oversight for ten USUHS School of Medicine sponsored/cosponsored GME programs and executes OASD (HA) taskings relating to GME in the DoD. As force reduction occurs, a decrement and realignment of military GME is inevitable. Since GME is a guarantor of quality in the Military Health Services System (MHSS), it is essential that the quality of those remaining GME programs be sustained. The School of Medicine stands ready to serve as the academic base for military GME.

OASD(HA) has identified USUHS as a key element in the revision and integration of DoD GME programs. As directed, the School of Medicine will:

Continue to sponsor or cosponsor selected GME programs;

Continue to be the academic affiliate for many GME programs;

Expand consultative services to insure that accreditation is not jeopardized when DoD GME programs are integrated;

Assist with the implementation of a plan to select qualified program directors and play a role in the ongoing selection and evaluation of GME program faculty;

Assist with the implementation of a plan to continually collect and evaluate data and information on DoD GME programs to ensure academic and scientific excellence;

Actively carry out its role as a major academic affiliate in developing high quality uniformed GME physician faculty for all services;

Participate in the development and implementation of the overall OASD(HA) plan to integrate GME programs and faculty and to have an intra-DoD resident matching system;

Participate in the selection of trainees;

Continue significant and critical support to military GME programs in the National Capital Area (NCA) in the form of faculty supervision of trainees, support of Residency Review Committee (RRC) mandated research, curriculum enhancement, faculty development, and direct patient

Advise on militarily unique GME curricula.

Continuing Health Professional Education

Under Title 10, U.S. Code (Section 21 13), USUHS is mandated by Congress to "establish programs in continuing medical education for military members of the health professions to the end that high standards of health care may be maintained within the military medical services."

The USUHS Office of Continuing Health Professional Education (CHE) facilitates the continued professional growth of health care professionals in the uniformed services. In carrying out its principal responsibilities in FY94, CHE provided 418 accredited programs for CME with an attendance of 6,615 individuals, the majority of whom were military physicians. CHE provided 53 accredited nursing programs with an attendance of 2,585 nurses.

The Military Training Network (MTN), as part of the CHE Directorate, provides coordination, administrative support and quality assurance of resuscitative medicine training programs for the uniformed services. Cardiopulmonary arrest and trauma are the most frequent forms of medical emergencies in the civilian and military communities. **Knowledge of life-saving skills in uniformed and civilian medical personnel is vital to maintain operational readiness, safe work environments and daily medical care within the military.**

In 1982, MTN became the American Heart Association (AHA) affiliate for cardiac resuscitation for the uniformed services; this included Advanced Cardiac Life Support (ACLS) and Basic Life Support (BLS). Pediatrics Advanced Life Support (PALS) was added in 1989. The training for FY94 reflected as follows: ACLS, 157 organizations and 6,512 trained; BLS, 306 organizations and 154,989 trained; and PALS, 59 organizations and 2,483 trained.

In FY94, Advanced Trauma Life Support (ATLS) training was provided for 2,824 personnel, representing 17 organizations; Advanced Burn Life Support (ABLS) training was provided for 175 personnel, representing 2 organizations; and the Trauma Nurse Core Course (TNCC) provided training for 693 personnel, representing 3 organizations. In FY94, DoD experienced a cost avoidance of approximately \$8 million by using the MTN to centralize the administration of resuscitative medicine courses, to purchase course materials, and to pay student fees.

The Video Endoscopy Program provides an excellent example of the DoD cost avoidance achieved by the University's CHE programs. Using a conservative estimate of \$3000 tuition per course for the approximately 881 surgeons who have been trained, \$2.6 million of overall cost avoidance for DoD was realized; in FY94 alone, the cost savings to DoD was over \$700,000. The U.S. Army (7th Medical Command and 18th Medical Command) and the U.S. Navy (Western Pacific Program) realize cost savings by contracting with USUHS to have programs of targeted issues for specific audiences near their facilities in Germany, Korea, Guam, Yokosuka, and Okinawa. In FY94, the cost to the DoD to send the U.S. Army 7th Medical Command attendees stateside for similar courses would have been over

\$3 million. In FY94, 347 individuals received training in the Western Pacific Continuing Education Program (WESTPAC), funded by the Navy Health Sciences Education Training Command (HSETC). To send the 347 participants stateside at a cost of \$2,500 (travel, per diem, registration fees) for similar courses would have required \$867,500 of HSETC funding. At the 100th annual meeting of the Association of Military Surgeons of the United States (AMSUS), 1,717 nurses and 771 physicians received continuing education credit for participation in the conference, for an estimated cost avoidance of \$858,000. Also sponsored by the Department of Family Practice was the third annual world-wide "Capital Conference - Family Practice Board Review" for over 140 physicians. The use of local military faculty and facilities saved the various commands approximately \$100,000 in travel, per diem, and registration fee costs. As an example of tri-service training, the USUHS Department of Family Practice initiated a Primary Care Sports Medicine Fellowship in August 1994. Previously these fellowships were only available through out-service training. As a cost-saving measure, the Interservice Training Review Organization (ITRO) has recommended consolidation of the Army and Navy separate training programs in tropical medicine at USUHS, beginning in the summer of 1996. The course consists of four weeks of didactic instruction, and for some, two or four weeks of additional "hands-on" overseas experience. Participants can receive CME credit; the course will be available to graduate students in the Master of Public Health (MPH) and Master of Tropical Medicine and Hygiene (MTM&H) degree programs; some combination of didactic and practical training, still being determined, will qualify individuals for the Qualifying Examination in Tropical Medical and Travellers' Health of the American Society of Tropical Medicine and Hygiene.

The Relationship Between USUHS and Military Hospitals

There are more than 1,000 teaching hospitals in the United States. The Association of American Medical Colleges recognizes that teaching hospitals make "essential contributions to the missions of academic medicine by historically providing: the highest quality, most advanced patient care; inpatient and outpatient care training sites for physicians and other health care professions; and an indispensable venue for scientific discovery and significant research." USUHS has a wide range of affiliations with the following teaching/military hospitals:

Bremerton Naval Hospital
Brooke Army Medical Center
Charleston Naval Regional Medical Center
David Grant Air Force Medical Center
DeWitt Army Hospital
Eglin Air Force Regional Hospital
Eisenhower Army Medical Center
Elmendorf Air Force Regional Hospital
Fitzsimons Army Medical Center
Jacksonville Naval Hospital
Keesler Air Force Medical Center
Kimbrough Army Medical Center
Army Medical Center
Malcolm Grow Air Force Medical Center

Martin Army Community Hospital
National Naval Medical Center
Oakland Naval Hospital
Offutt Air Force Hospital
Pendleton Naval Hospital
Pensacola Naval Hospital
Portsmouth Naval Regional Medical Center
San Diego Naval Hospital
Tripler Army Medical Center
Walter Reed Army Medical Center
Wilford Hall Air Force Medical Center
William Beaumont Army Medical Center
Womack Army Community Hospital
Wright-Patterson Air Force Medical Center

USUHS medical students do their third year clinical clerkships at sixteen military hospitals, representing all military services. The third year class of approximately 165 students has eight required clinical clerkship rotations of six weeks each, for a total of 1,320 third year rotations. The fourth class of approximately the same size has ten four-week blocks for 1,650 rotations. As a part of the; training and work as medical clerks, USUHS School of Medicine third and fourth year students provide hundreds of thousands of hours of patient care-related services in these hospitals during each calendar year. Such services provided include examination of patients, providing post-operative care, organization and maintenance of the completion of the medical history and physical examinations of patients, assistance at surgery and delivery of newborns, and updating progress notes in patient records. These services, performed by USUHS medical students in a supervised setting, provide necessary and important support in the provision of competent medical care to the men, women, and children receiving treatment at these military medical facilities. Therefore, without the USUHS School of Medicine students, additional resources would be needed for these hospitals to provide the same level of patient care.

Five of the major USUHS academic departments - Internal Medicine, Surgery, Obstetrics and Gynecology, Pediatrics, and Psychiatry - use the Walter Reed Army Medical Center and the National Naval Medical Center as major clinical instructional sites. In addition, students take clerkships at other teaching hospitals affiliated with the USUHS School of Medicine, such as the Portsmouth Naval Hospital, Malcolm Grow, Wilford Hall, Keesler, and Wright Patterson Air Force Medical Centers, and Brooke Army Medical Center. The USUHS School of Medicine Department of Family Practice sends students to eight hospitals in addition to the Malcolm Grow Air Force Medical Center.

It is well-recognized in the field of medical education that accredited post-graduate training programs must include opportunities for interns and residents to acquire and practice teaching skills that enhance their own learning and develop their skills at teaching patients. They teach at the patient's bedside during work rounds, present topics at department or subspecialty conferences or rounds, teach in journal clubs to remain current with the medical literature, and teach a wide variety of skills to medical students.

Opportunities to practice teaching skills are considered important to interns' and residents' education for two reasons. First, much of how one learns to practice medicine goes beyond the textbook presentation; rather it is acquired from the teaching of experienced clinicians in clinical settings. Therefore, as a part of their professional development, interns and residents must learn to teach colleagues and those junior to them. Second, the work required to prepare themselves to teach others provides a special challenge to physicians to expand their knowledge base and transmit that knowledge to others. USUHS medical students receive much of their education in clinical clerkship rotations from housestaff and residents.

Many uniformed and civilian faculty of the USUHS School of Medicine who are on staff in the school's affiliated teaching hospitals consistently demonstrate an ongoing commitment to research. For

example, USUHS faculty members made up a substantial proportion of the principal and associate investigators on the 154 research protocols initiated at the Walter Reed Army Medical Center during 1991. Most of these studies were on human subjects and a number were based on participants in collaborative group studies. Similar programs of varying size exist at the other major teaching hospitals. Researchers at these sites obtain funding through their respective services, the Henry M. Jackson Foundation, the National Institutes of Health, and other granting agencies. A number of USUHS School of Medicine faculty are located at the Walter Reed Army Institute of Research, the Armed Forces Radiobiology Research Institute, the Naval Medical Research Institute and the National Institutes of Health.

As recently reported to the Liaison Committee on Medical Education (LCME), an analysis of military and civilian faculty time devoted to clinical service was priced out at about \$3.8 million per year. In addition to providing patient care and providing medical student and graduate medical education, these USUHS "off campus" faculty serve as clinical scientists, on agency advisory councils, National Institutes of Health study sections, and hold editorial and reviewer positions on scientific journal boards.

THE UNIVERSITY'S EXPANDED MISSIONS

The Casualty Care Research Center. USUHS Department of Military and Emergency Medicine

The Casualty Care Research Center (CCRC) was established under the USUHS Department of Military and Emergency Medicine in July 1989 as a center of excellence for injury control and casualty care research. In keeping with the overall mission of the University, the CCRC conducts research and investigations of issues relating to injury control, casualty care, operational and disaster medicine; provides medical students, graduate physicians and other uniformed medical personnel with a disciplined, educational, research experience in combat casualty care, injury epidemiology, trauma management, and related areas; maintains a strong collaborative relationship with other federal, state and local agencies which share common interests in casualty care and operational medicine; serves as a repository of resources and information relating to injury control, injury epidemiology and operational medicine for the uniformed services community; and, provides research, resource and educational support, technical assistance, and other community service to USUHS, the uniformed services, and other federal, state, and local elements.

The Wound Data and Munitions Effectiveness Team (Vietnam) database (WDMET) is maintained by the CCRC. It contains information on the tactical engagement, weapons employed, resulting injuries and treatment in the pre-hospital and hospital environments on approximately 8,000 combat casualties. It is the only collection of its kind in the world. Photographs, medical records, X-rays, recovered bullets and fragments truly make this a unique resource.

An "archive plan" has been implemented in accordance with the CCRC strategic plan. The

CCRC has responded to more than 40 requests for archival and research support from the military services and other agencies.

The Counter Narcotics Tactical Operations Medical Support (CONTOMS) program was initiated by the CCRC at the end of FY90. Personnel from approximately 314 agencies in 43 states have graduated from the program. In the congressional report "Fighting Drug Abuse: New Directions for Our National Strategy, "the program was singled out as an example of "an initiative [which] has produced positive results and should be expanded." (Fighting Drug Abuse: New Directions for Our National Strategy, Prepared by the Majority Staffs of the Senate Judiciary Committee and the International Narcotics Control Caucus, February 1991, p. 39). Applications to the program continue to exceed available space.

The CCRC provided extensive consultation and support to the Joint Chiefs (J-4 Medical Readiness) relating to the issue of casualty data information management during Operation Desert Storm and is now funded to coordinate the process of data collection during multiple casualty events. The CCRC is currently supported by extramural funding. Billeted personnel within the USUHS Department of Military and Emergency Medicine participate in various activities of the CCRC based on their professional interests and as their teaching and clinical responsibilities permit.

The Traumatic Stress Center

Research and consultation in psychiatric responses to trauma and disasters is a major component of the mission of the Traumatic Stress Center. Consultation is active, ongoing and related to the collection of data and the development of recommendations for operational implementation. Consultation is established with both local commanders and headquarters elements. Teams are constituted from faculty at USUHS and affiliated teaching hospitals as well as local medical and health care personnel. On-site teams collect data and establish relationships to provide ongoing consultation to commanders and civilian community leaders and to facilitate longitudinal follow-up after disasters and traumatic events.

Recent activities have involved psychiatric consultation and the development of lessons learned in the following situations: effects of Hurricane Omar and the subsequent earthquake on USN families; consultation with the National Academy of Sciences on the effect of Chemical and Biological Warfare in World War II; traumatic effects of breast cancer on husbands; air disaster in the 128th Air Refueling Group; consultation to Los Angeles earthquake areas; consultation to NIH, National Academy of Sciences and Department of Defense on the psychological effects of toxic exposure in the Gulf War; consultation on the Fairchild AFB disaster; consultation to the Navy Aerospace and Operational Medicine Institute on prisoner of war studies; and consultation to the Air National Guard elements involved in disaster work after the U.S. Air plane crash in Pittsburgh, Pennsylvania.

The Centers for Preventive Medicine and Public Health

The Centers for Preventive Medicine and Public Health (CPM/PH) is an entity within the Department of Preventive Medicine and Biometrics of the USUHS School of Medicine. The centers operate under terms of a memorandum of understanding with the Henry M. Jackson Foundation for the Advancement of Military Medicine. The CPM/PH combines broad expertise in research, consultation, education, training, and clinical preventive medicine and public health, to develop databases and analytic methodologies, prepare innovative curricula, and evaluate process and outcomes in clinical practice. Service is rendered to program managers and policy makers in the Department of Defense, other federal agencies, local governments, and private organizations concerned with health policies and services.

The CPM/PH also coordinates the resources of multiple separate centers of excellence to ensure that the appropriate collective expertise is applied. The CPM/PH enhances the stability and long-term effectiveness of its parent organization by attracting, retaining, and providing for the professional growth of outstanding faculty and staff, by providing high quality educational experiences to students, and by promoting excellence in clinical preventive medicine and public health.

Telemedicine

USUHS has been actively participating in several telemedicine demonstration projects. These efforts are aimed at providing modern medical and surgical technology to isolated, even primitive areas. In one demonstration project, the University served as a demonstration test platform for the Army Surgeon General's telemedicine bridge to Somalia. Using high definition digital still cameras, off-the-shelf personal computers, and INMARSAT telephone links, physicians at field facilities in Somalia could examine patients, photograph observed conditions, annotate the photos, and transmit them to waiting specialists here and at the Walter Reed Army Medical Center. This telemedicine system was also used more recently in support of teaching a class in emergency medicine through an interactive link with a field hospital in Croatia.

In a separate project, the Department of Military and Emergency Medicine developed a telemedicine course to train corpsmen, physician's assistants, and physicians in the communication and clinical applications of telemedicine. Each of the three groups trained have subsequently deployed in support of U.S. forces in Macedonia. In addition, the department operates a telemedicine link to Macedonia, providing full spectrum medical consultation to deployed U.S. personnel.

In September, USUHS and NASA cosponsored the Second International Conference on Telemedicine, "Remote Health Care and Disaster Response." This conference attracted more than 300 attendees from the U.S. and abroad, including congressional staff, federal agency staff, communications technology experts, and a wide array of health care practitioners and researchers. The proceedings will be published in the "Journal of Medical Systems" and will provide guidance and recommendations for local, national, and international programs in the private and public sectors.

By these and a number of other activities, USUHS has established a position of national and international leadership in telemedicine.

Armed Forces RadiobiologyResearch Institute (AFRRI)

The Armed Forces Radiobiology Research Institute is a tri-service research center established in 1961. The institute employs about 180 military and civilian scientists, physicians, veterinarians, technicians, and support personnel. AFRRI is located on the grounds of the National Naval Medical Center in Bethesda, Maryland. It conducts research on the biological effects of ionizing radiation, with emphasis on operational biomedical questions relating to the national defense, and has the only reactor in the country dedicated to radiobiology research.

A Program Decision Memorandum (PDM) in September 1992 transferred AFRRI to the management of USUHS beginning in FY-94. AFRRI is currently working with the Defense Nuclear Agency (DNA) regarding counter-proliferation issues particularly relating to chemical warfare/biological warfare weapons, and has accomplished preliminary experiments designed to assess the feasibility of neutralizing such weapons with ionizing radiation. AFRRI is currently collaborating on several research projects in the former Soviet Union to study long-term medical effects of chronic exposure to radiation in Russia and Kazakstan, dose reconstruction, and psychological and medical effects of the Chernobyl disaster.

It is the intent of DoD that much of the cost of AFRRI be gradually converted to a reimbursable system that will allow DoD components, other federal agencies, and granting agencies to fully reimburse AFRRI for the cost of research and services provided. Decreases in the budget over the Program Objective Memorandum (POM) were expected to be replaced by funds received from customers for services rendered. AFRRI, with USUHS's assistance, is establishing direct and indirect reimbursement rates and has begun to approach customers concerning these new arrangements.

Graduate School of Nursing

USUHS received a congressional mandate and \$1 million in the 1993 Defense Appropriations

Act to "begin planning and implementation of a training program for nurse practitioners." This was interpreted to include the various disciplines within the field of advanced practice nursing. Thus, planning and implementation have resulted in a Graduate School of Nursing (GSN) to prepare advanced practice nurses for the uniformed services.

The GSN consists of two programs, the Family Nurse Practitioner (FNP) Program and the Nurse Anesthesia (NA) Program. Both are core programs permitting specialty areas to be added as needed by the uniformed services. The FNP program admitted three U.S. Public Health Service (USPHS) students in August 1993 who are now in their second year of classes. Ten more students were admitted to the FNP program in August 1994, all from the U.S. Air Force. The NA program admitted eight students in June 1994 (one PHSand seven USAF). Both programs will grant the Master of Science in Nursing

(MSN) degree.

Accreditation for both GSN programs is in progress and will be granted by the National League for Nursing (NLN), the primary accrediting body for all nursing programs in the United States. This accreditation will allow USUHS to award the Master of Science in Nursing (MSN). The NLN awards initial accreditation after the graduation of the first class of students and retroactively provides accreditation for one year, thus protecting the graduates of the first class. In April 1994 the NA program was granted full accreditation by the Council on Accreditation (COA) of Nurse Anesthesia Educational Programs, permitting the admission of students to the program.

A needs assessment study has been completed by the GSN with the advice and assistance of the Federal Nursing Chiefs. The study confirmed that there is a tremendous requirement in the Department of Defense and the USPHS for nurse practitioners, particularly certified registered nurse anesthetists. The need is so great that the GSN programs and the individual services' programs can only partially satisfy the requirement. In the Public Health Service, in one service area, the 1993–94 cost of contracting for one certified registered nurse anesthetist (CRNA) was \$180,000 per year. If the Indian Health Service had a CRNA commissioned officer to assign, the cost would have been approximately \$55,000 per year.

Clinical Psychology Ph.D. Program at USUHS

USUHS was congressionally tasked on December 9, 1992, to establish a Ph.D. program in Clinical Psychology for the 1993-94 academic year. "The students are to be drawn from qualified applicants in the services and in the private sector." This program was initiated in the 1992 academic year with one student from the Army. One Army 0-3 began the program in academic year 1992-1993 and is currently in his third year. Three additional officers, an Army 0-1, an Air Force 0-3 and a Navy 0-2 entered the program in August 1993 and are in their second academic year. Officers from the three services comprise the entering class of August 1994; they are an Army 0-4, an Air Force 0-1, and a Navy 0-3.

The curriculum and program of study were redesigned by a joint group consisting of the USUHS School of Medicine Medical and Clinical Psychology faculty, representatives from the three services, and outside consultants. Courses are being taught by members of the services who have received clinical faculty appointments at the USUHS School of Medicine and others by faculty from nearby medical schools.

A new faculty member has been appointed as the Director of Clinical Training. Two junior clinical faculty members were recruited and joined the faculty in August 1994. Over 20 active duty military psychologists from the three services have been appointed as clinical faculty to assist with the program.

Women's Health Curriculum Advisory Committee at USUHS

The House Armed Services Committee Conference Report (103-200, page 305) for the National Defense Authorization Act for Fiscal Year 1994 states:

"...the committee directs that a women's health curriculum advisory committee be established at the Uniformed Services University of the Health Sciences F. Edward Hebert School of Medicine to promote the comprehensive integration of women's health issues into the current curriculum at the University. Such a curriculum should be designed to better prepare the University's graduates to diagnose and treat the unique health care needs of active duty women as well as other female beneficiaries of the military medical system. The advisory committee should develop a curriculum that devotes specific attention to the illnesses affecting women. As a minimum, the committee's membership should include the Surgeons General of the three military departments and the Dean of the School of Medicine, or senior officials experienced in women's health issues who may be designated as their representatives, and other experts in women's health issues.

The committee directs the Secretary of Defense to prescribe regulations establishing this curriculum advisory committee not later than 180 days after the enactment of this Act and that the advisory committee be in place to participate in the development of the curriculum for the 1995 academic year."

Notification of this congressionally-mandated requirement was sent from Health Affairs to the President, USUHS, in January 1994. The membership of the committee has been established according to the legislation.

A subgroup of the full committee met in March 1994, and a draft document of educational goals, objectives, and outcomes was prepared for a review by the full committee in June 1994. The document was revised based on committee comments, and is currently circulating among USUHS School of Medicine academic departments for review.

Training Uniformed Psychologists for PrecsriptionWriting Authority

This congressionally mandated demonstration project is intended to train clinical psychologists to prescribe certain psychotropic drugs. The Army Surgeon General was charged as executive agent to develop a demonstration project that would prepare uniformed clinical psychologists to prescribe a limited formulary of these drugs within the military health care system. In 1991, four military clinical psychologists(two from the Army and two from the Navy) were assigned to participate in this demonstration project. To develop this program, Walter Reed Army Medical Center (WRAMC) was given primary responsibility to develop a new curriculum for the didactic and clinical components of

this two-year training program. The American College of Neuropsychopharmacology (ACNP) serves as external evaluator of this program.

The development of a one-year didactic program at USUHS to support a two-year training program was completed and initiated with the beginning class in June 1993. Where possible, these courses are used to support the development of other USUHS programs. Every effort was made to minimize costs and maximize benefits from these educational programs. The curriculum plans were approved by the Evaluation Committee from the ACNP.

Two of the original clinical psychologists completed the training project in May 1994, and are assigned to USN clinical facilities in Portsmouth and Bethesda. The five new students who began in June 1994 are following the modified one-year didactic curriculum.

Community/Public Service/National Health Care Initiatives

In a recent Presidential correspondence, the current Administration issued a plea for all academic centers to inspire an ethic of service to the nation. The USUHS curriculum provides a focused emphasis on primary care medicine, public health, preventive medicine, mental health and wellness; both the curriculum and the graduates provide a working model for current national health care initiatives requiring physicians capable of operating within a coordinated system of care. USUHS School of Medicine physicians have received an education designed to prepare them for their roles as uniformed medical officers in the Department of Defense and the Public Health Service.

Traditionally, the military considered its "community" to be the service members and their families in their military units and housing areas and devoted resources to reach out to those members and to make certain that they take advantage of the medical services available at the military hospitals and clinics. However, this viewpoint, in light of national command authority to commit military assets to humanitarian missions, has expanded considerably. The USUHS School of Medicine is among the top ten schools in the nation for graduating students into family practice.

Many of the community (public) activities at USUHS have been initiated by student body members of the School of Medicine, under the leadership of the USUHS Department of Family Practice and the USUHS Office of Minority Affairs. USUHS School of Medicine faculty have developed a fourth year community medicine elective at So Others Might Eat (S.O.M.E.), a community center providing food, health care and job retraining for the homeless which has a medical clinic and many outreach programs for the homeless population. Medical students and faculty work in a coverage program for a local free clinic providing evening health care for the homeless and the underserved in Montgomery County. The program is sponsored by Mobile Medical Inc., a volunteer-based physician program. Several evenings a month, both USUHS physicians and medical students work at the clinic providing free care. Medical students have been active for the past several years in providing administrative and medical support for local shelters and feeding programs, i.e., Shepherd's Table. In addition to the Helping Hands Clinic experience, the Student National Medical Association (SNMA)

has been active in the Youth Science Enrichment Program (YSEP) for over five years. The goal of this program is to expose elementary school children in the inner city to role models and careers in the biomedical sciences. Groups of students make monthly visits to Birney E.S. and Martin Luther King E.S. in Southeast Washington, D.C. and Walker Jones E.S. in Northeast Washington, D.C.

The Future

While the majority of physicians needed by the services will continue to be recruited through the Armed Forces Health Professions Scholarship Program, **USUHS provides**, at a reasonable cost to the taxpayer, a core cadre of physician-leaders who are specifically educated in the academic discipline of military medicine.

As the USUHS supporters have pointed out, estimates released last fall by the Congressional Budget Office emphasize that the potential savings from closing the University are greatly overstated. Even if other medical schools could and would assume the task of providing the specialized education now available through USUHS, there are serious questions about any likelihood of savings over time.

Elimination of the University would be a step backward in the quality of medical care offered to members of our Armed Services. Algeria, Belgium, Bulgaria, France, Germany, Greece, India, Indonesia, Iran, Italy, Japan, Korea, Mexico, Pakistan, the People's Republic of China, Poland, Russia, South Africa, Taiwan, and Turkey all recognize this need and fund government-sponsored military medical schools.

The faculty and staff of USUHS look forward to the GAO report that is currently underway as prescribed by the Congress. The GAO team is reviewing our University for quality, dedication to service to the nation, unique training, the USUHS role in the overall issue of the special needs of military medicine, and the role USUHS maintains for military medical readiness. After these factors are thoroughly reviewed, there is little doubt that the country's only fully accredited military medical school will continue to meets its mission in providing military medical readiness for those who serve our nation.